Denes Hnisz, Ph.D.

PERSONAL DATA

Nationality:	Hungarian
Date of birth:	11. 11. 1979.
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EDUCATION AND PROFESSIONAL EXPERIENCE

2017-	**Visiting Scientist** - laboratory of Richard Young, Whitehead Institute for Biomedical Research, Cambridge, MA, USA.
2017-	Private Consultant for Life Sciences
2012 - 2017	**Postdoctoral fellow** - laboratory of Richard Young, Whitehead Institute for Biomedical Research, Cambridge, MA, USA.
2009 – 2012	**Postdoctoral fellow** - laboratory of Karl Kuchler, Department of Medical Biochemistry at the Medical University of Vienna, Austria.
2004 - 2008	**Postgraduate student** (Ph.D.) - laboratory of Karl Kuchler, Department of Medical Biochemistry at the Medical University of Vienna, Austria. Ph.D. Thesis title: Histone-modifier genes regulate morphogenesis of *Candida albicans*
1999 - 2004	**Undergraduate student** (M.Sc.) - laboratory of Andras Malnasi-Csizmadia, Eötvös Loránd University (ELTE), Faculty of Science, Budapest, Hungary. Degree with Honors. Thesis title: ”Engineering polimeric GFP molecules and manipulating them using atomic force microscopy”

PRIZES AND FELLOWSHIPS

2016	Margaret and Herman Sokol Postdoctoral Award
2013 -2016	**Erwin Schrödinger Fellowship** of the Austrian Science Fund (FWF)
2010	**Annual Publication Prize** of the German Speaking Mycological Societies (DMykG) for the article “The Set3/Hos2 Histone Deacetylase Complex Attenuates cAMP/PKA Signaling to Regulate Morphogenesis and Virulence of *Candida albicans*.”
2004-2007	**Vienna Biocenter International Ph.D. Programme Fellowship** funded by the Austrian Science Fund (FWF)
2007 May	“**Young Investigator Award**” for a poster presentation at the 2nd FEBS Advanced Lecture Course on Human Fungal Pathogens
2003-2004	**National Scholarship** of the Republic of Hungary awarded by the Hungarian Ministry of Education
2003 Apr.	**Special award** at the National Students’ Natural Sciences Conference in Szeged, Hungary. Presentation title: “Engineering polimeric GFP molecules and manipulating them using atomic force microscopy”

PUBLICATIONS

Hnisz D*, Shrinivas K*, Young RA, Chakraborty A, Sharp PA. A phase separation model predicts key features of transcriptional control *Cell* (2017) Mar 23;169(1):13-23

*co-first author

Abraham BJ, **Hnisz D**, Weintraub AS, Kwiatkowski N, Li CH, Zhaodong Li, Weichert-Leahey N, Rahman S, Liu Y, Etchin J, Li B, Shen S, Lee TI, Zhang J, Look AT, Mansour MR, Young RA. Small genomic insertions form enhancers that misregulate oncogenes. *Nature Communications* (2017) Jun 1;8:15797

Bradner JE, **Hnisz D,** Young RA. Transcriptional Addiction in Cancer. *Cell* (2017) Feb 9;168(4):629-643

**Hnisz D*[$],** Day DS*[$], Young RA[$]. Insulated Neighborhoods: structural and functional units of mammalian gene control. *Cell* (2016) Nov 17;167(5):1188-1200
*co-first author; [$]co-corresponding author

Clark VE, Harmancı AS, Bai H, Youngblood MW, Lee TI, Baranoski JF, Ercan-Sencicek AG, Abraham BJ, Weintraub AS, **Hnisz D**, Simon M, Krischek B, Erson-Omay EZ, Henegariu O, Carrión-Grant G, Mishra-Gorur K, Durán D, Goldmann JE, Schramm J, Goldbrunner R, Piepmeier JM, Vortmeyer AO, Günel JM, Bilgüvar K, Yasuno K, Young RA, Günel M. Recurrent somatic mutations in POLR2A define a distinct subset of meningiomas. *Nature Genetics*. (2016) Oct;48(10):1253-9. doi: 10.1038/ng.3651.

Hnisz D*, Weintraub AS*, Day DS, Valton AL, Bak RO, Li CH, Goldmann J, Lajoie BR, Fan ZP, Sigova AA, Reddy J, Borges-Rivera D, Lee TI, Jaenisch R, Porteus MH, Dekker J, Young RA. Activation of proto-oncogenes by disruption of chromosome neighborhoods. *Science*, Mar 3. pii: aad9024. (2016)
*co-first author

Ji X, Dadon DB, Powell BE, Fan ZP, Borges-Rivera D, Shachar S, Weintraub AS, **Hnisz D**, Pegoraro G, Lee TI, Misteli T, Jaenisch R, Young RA. 3D chromosome regulatory landscape of human pluripotent cells. *Cell Stem Cell*, Feb 4;18(2):262-75 (2016)

Hnisz D*, Schuijers J*, Lin CY, Weintraub AS, Abraham BJ, Lee TI, Bradner JE, Young RA. Convergence of developmental and oncogenic signaling pathways at transcriptional super-enhancers. *Mol Cell* 2015 Mar 18. pii: S1097-2765(15)00128-8.
*co-first author

Dowen JM*, Fan ZP*, **Hnisz D***, Ren G*, Abraham BJ, Zhang LN, Weintraub AS, Schuijers J, Lee TI, Zhao K, Young RA. Control of cell identity genes occurs in insulated neighborhoods in mammalian chromosomes. *Cell* 159(2):374-387 (2014).
*co-first author

Nobile CJ, Fox EP, Hartooni N, Mitchell KF, **Hnisz D**, Andes DR, Kuchler K, Johnson AD. A histone deacetylase mediates biofilm dispersal and drug resistance in *Candida albicans*. *mBio* 10;5(3):e01201-14 (2014).

Hnisz D*, Abraham BJ*, Lee TI*, Lau A, Saint-Andre V, Sigova AA, Hoke HA, Young RA. Super-enhancers in the control of cell identity and disease. *Cell*, 155(4):934-47 (2013)
*co-first author

Whyte WA*, Orlando DA*, **Hnisz D***, Abraham BJ, Lin CY, Rahl PB, Lee TI, Young RA. Master Transcription Factors and Mediator Establish Super-Enhancers at Key Cell Identity Genes. *Cell*, 153(2):307-19 (2013)
*co-first author

Hnisz D, Bardet AF, Petryshyn A, Glaser W, Schöck U, Stark A, Kuchler K. Histone deacetylation at coding sequences adjusts transcription kinetics during *Candida albicans* morphogenesis. *PLoS Genetics* 8(12):e1003118 (2012)

Tscherner M, Stappler E, **Hnisz D**, Kuchler K. The histone acetyltransferase Hat1 facilitates DNA damage repair and morphogenesis in *Candida albicans*. *Mol Microbiol,* 86(5):1197-214 (2012)

Hnisz D, Tscherner M, Kuchler K. Targeting chromatin in fungal pathogens as a novel therapeutic strategy: histone modification gets infectious. *Epigenomics* 3(2):129-32 (2011)

Hnisz D, Tscherner M, Kuchler K. Morphological and Molecular Genetic Analysis of Epigenetic Switching of the Human Fungal Pathogen *Candida albicans*. *Methods Mol Biol* 734:303-15 (2011)

Hnisz D, Majer O, Frohner IF, Komnenovic V, Kuchler K. The Set3/Hos2 Histone Deacetylase Complex Attenuates cAMP/PKA Signaling to Regulate Morphogenesis and Virulence of *Candida albicans*. *PLoS Pathogens* 6(5): e1000889 (2010)

Guinea-Viniegra J, Zenz R, Scheuch H, **Hnisz D**, Holcmann M, Bakiri L, Schonthaler HB, Sibilia M, Wagner EF. TNFalpha shedding and epidermal inflammation are controlled by Jun proteins. *Genes Dev*, 15;23(22):2663-74 (2009)

Hnisz D, Schwarzmüller T, Kuchler K. Transcriptional loops meet chromatin: a dual-layer network controls white-opaque switching in *Candida albicans*. *Mol Microbiol*, 74(1):1-15 (2009)

PATENTS

Young RA, Whyte WA, **Hnisz D**, Loven J, Hoke HA, Orlando DA, Lin CY, Lee TI.
Super-enhancers and methods of use thereof (Patent number**:** 9181580).
Licensed to Syros Pharmaceuticals

SELECTED TALKS

2016 May New York Genome Center Epigenomics Symposium, New York, USA
"Regulatory landscapes of pluripotent and cancer cells"

2016 February Keystone Symposium: Enhancer Malfunction in Cancer, Santa Fe, USA
"Enhancer structure and Function in Health and Disease"

2015 May Abcam Symposium on Epigenetics: Bridging Development and Disease, Boston, USA
"Activation of proto-oncogenes by disruption of chromosome neighborhoods"

2014 August 11th EMBL Conference on Transcription and Chromatin
EMBL, Heidelberg, Germany
"Signaling modules in Transcriptional Super-enhancers"

2014 July Cell Symposium on Transcriptional Regulation in Development
Chicago, IL, USA
"Structure and Function of Super-enhancers in Control of Cell Identity"

2013 June 11th ISSCR Annual Meeting
Boston, MA, USA
"Super-enhancers at Key Cell Identity Genes"

SELECTED POSTER PRESENTATIONS

2015 August CSHL Meeting: Mechanisms of Eukaryotic Transcription
Cold Spring Harbor, NY, USA
"Activation of proto-oncogenes by disruption of chromosome neighborhoods"

2014 July Cell Symposium on Transcriptional Regulation in Development
Chicago, IL, USA
"Structure and Function of Super-enhancers in Control of Cell Identity"

2014 Feb. Keystone Symposium on Transcriptional regulation
Santa Fe, NM, USA
"Roles of Super-enhancers in the Transcriptional Control of Cell Identity"

2013 June 11th ISSCR Annual Meeting
Boston, MA, USA
"Super-enhancers at Key Cell Identity Genes"

REFEREES

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